Extension Service Review

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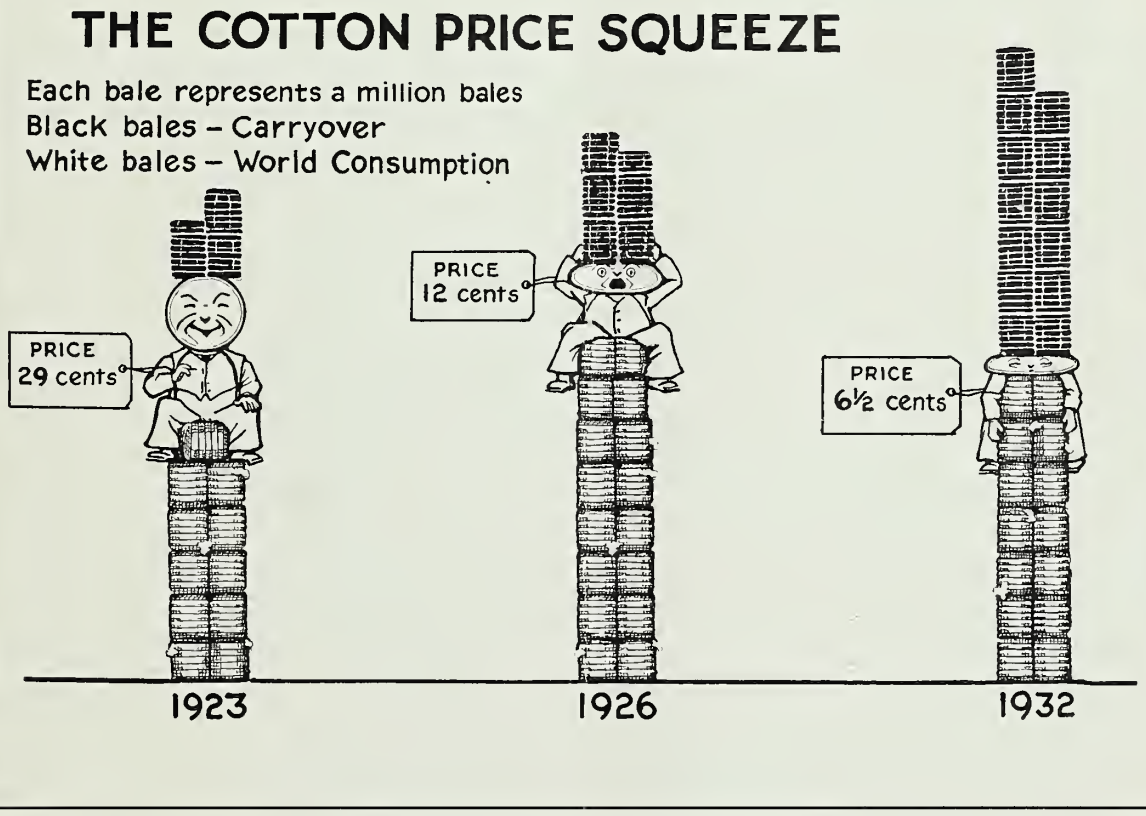

AN INCREASINGLY HEAVY SURPLUS HAS SQUEEZED DOWN THE PRICE OF COTTON. TO REDUCE THIS SURPLUS AND TO RESTORE A FAIR EXCHANGE VALUE FOR COTTON IS THE GOAL OF COTTON PRODUCTION ADJUSTMENT

ISSUED MONTHLY BY THE EXTENSION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

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Contents

In This Issue

When the late Dr. Seaman A. Knapp inaugurated the conducting of demonstrations on farms by farmers to show farmers how they could apply the results of agricultural research he did something that will not be forgotten. J. A. Evans, associate chief of the Office of Cooperative Extension Work, faithfully describes the experiences of Dr. Knapp in laying the foundations of present-day extension work.

"Can we control soil erosion?" is answered by the record. During the past 18 years, county agricultural agents have reported terracing and gully-control work protecting 17,038,715 acres. Of such importance is this work in our national land utilization program that a major section of this issue of the Review is devoted to these results.

Mortgage relief at the rate of some $3,000,000 a day was being brought to farmers during the latter part of November. Albert S. Goss, Land Bank Commissioner, Farm Credit Administration, discusses reduced interest rates, deferred payments on principal, how appraisals are made, and how loans can be obtained from the $200,000,000 fund of the Land Bank Commissioner.

The progress in cotton production adjustment, as described by Cully A. Cobb, in charge of the program, will be of interest to extension workers in every section of the country.

Wisconsin farm families demonstrate how improvements can be made at slight expense by planting native shrubs and trees on home grounds. Besides using shrubs and trees from their own woodlots in landscaping their grounds, they laid out drives and walks using gravel from nearby pits for the purpose.

Subsistence homesteads, the plan for which is included in the recovery program, may prove helpful to many people, as it contemplates primarily the raising of living standards. M. L. Wilson, director of the subsistence homesteads division of the Department of the Interior, discusses the three types of homesteads that are being considered. He calls the attention of extension agents to the importance of the assistance they can give in the planning of operations tending to produce and preserve food for home consumption.

On The Calendar

Annual Extension Conference, College Park, Md., January 8–9.

Annual Extension Conference, Laramie, Wyo., January 8–12.

Annual Extension Conference, New Brunswick, N.J., January 9–10.

Farm and Home Week, Baltimore, Md., January 9–13.

National Western Stock Show, Denver, Colo., January 13–20.

Farm and Home Week, University Farm, St. Paul, Minn., January 15–20.

Farm and Home Week, Lexington, Ky., January 23–26.

Annual Extension Conference, Orono, Maine, January 30 to February 2.

Farm and Home Week, Ames, Iowa, January 29 to February 3.

Farm and Home Week, Madison, Wis., January 29 to February 3.

Farm and Home Week, East Lansing, Mich., January 29 to February 3.

Annual Extension Conference, Morgantown, W.Va., February 6–8.

Farm and Home Week, Morgantown, W.Va., February 5–8.

Farm and Home Week, Ithaca, N.Y., February 12–17.

Farm and Home Week, Brookings, S.Dak., February 13–17.

Rural women in Florida have stocked both home and "relief" pantries with canned fruits, vegetables, and meats to overflowing. Home demonstration agents assisted in planning canning budgets. In many counties they helped establish a canning center in each community where produce was canned for distribution to needy families by the local emergency relief council.

Vegetables grown and canned by unemployed people in Hartford City, Ind., will go a long way in keeping them from being hungry this winter. County Agent Walter W. Rusk enlisted the aid of the Kiwanis Club to obtain land and seeds for the gardens and jars for canning the surplus produce.

THE EXTENSION SERVICE REVIEW is issued monthly by the Extension Service of the United States Department of Agriculture, Washington, D.C. The matter contained in the Review is published by direction of the Secretary of Agriculture as administrative information required for the proper transaction of the public business. The Review seeks to supply to workers and cooperators of the Department of Agriculture engaged in extension activities, information of especial help to them in the performance of their duties, and is issued to them free by law. Others may obtain copies of the Review from the Superintendent of Documents, Government Printing Office, Washington, D.C., 5 cents a copy, or by subscription at the rate of 50 cents a year, domestic, and 75 cents, foreign. Postage stamps will not be accepted in payment.

C. W. Warburton, *Director* C. B. Smith, *Assistant Director* Reuben Brigham, *Editor*

Extension Service Review

VOL. 4 WASHINGTON, D.C., DECEMBER 1933 NO. 8

The Farmers' Problem—Everybody's Problem

How to Bring About a Fair Exchange Value for Farm Products

H. A. WALLACE
Secretary of Agriculture

TO MAKE IT possible for farm products to have fair exchange value for city products is the fundamental purpose of the Agricultural Adjustment Act. Fair exchange value in the act is described as the relationship which existed between farm products and goods purchased by farmers during the 5-year pre-war period 1909 to 1914. At the time the act was written in March of 1933, grain was bringing only 36 percent of fair exchange value and farm products as a whole were only bringing one half fair exchange value. Farmers' taxes and interest charges were twice the pre-war figures. It was this completely extraordinary situation, existing in a mild form from 1921 to 1930 and in an extreme form during 1931 and 1932, which brought about the destruction of thousands of country banks, the foreclosure or sale for taxes of well over a million farms, and violent outbreaks on the part of people who ordinarily are the most conservative, patient, and long-suffering class in our Nation.

During the period from 1921 to 1928 most of the farm leaders thought that the proper way to restore farmers' purchasing power was by so using the centralizing power of government that farmers might subsidize their exports with their own money. This was the principle involved in the equalization fee of the McNary-Haugen bill which twice passed Congress and which was twice vetoed by former President Coolidge.

Most of the farm leaders in those days seemed to think that we could sell unlimited quantities of agricultural products abroad if we only made the price low enough, and that the situation might be made tolerable to the farmers inside the United States by moving enough stuff out of the country so that the domestic price level would rise to the pre-war normal relationship with things which farmers buy. Full account was not taken of the creditor position of the United States, nor the debtor position of many of the European countries, not to mention the determination of these countries to encourage their domestic agriculture by excessive tariffs, bounties, quotas, and other governmental devices. Starting in 1927 most of the leading nations began in one way or another to try to protect their agricultural producers. The result was to increase production and cut down consumption.

> IF WE COULD rid the general mass of our people of that paralyzing fear which breeds and grows at a bare sustenance level of wages and prices, and which spreads in time to infect the whole of business and society, it is conceivable that we could proceed in time from an economy of denied plenty, with heaping surpluses next door to bitter hunger, to an economy of potential abundance developed to the uttermost and ungrudgingly shared. It is mean and niggardly in a land so wide and rich as this one to stem the currents of production, and to deflect the things all men desire into channels so limited for a privileged few. It is bad management. Perhaps we can evolve in this country an economy that deals in potentialities instead of in denial. Perhaps in time we shall be able safely to unleash the productive capacities of all our industries, including agriculture, and turn out for the widest distribution imaginable the kinds of goods which Americans, and people throughout the world in general, achingly desire.
>
> H A Wallace

Increase of Foodstuffs

It was in 1926 that world stocks of basic foodstuffs and raw materials began to increase, and with every increase prices went down in spite of governmental action to the contrary. Each country was trying to get off a "hot spot" so far as its own producers were concerned, but in so doing was making its world position worse rather than better. By 1932 the carry-over accumulation of foodstuffs and raw materials for the world as a whole was more than twice that of 1926. The accumulation of some products, it is true, may have been caused more by underconsumption than by overproduction, but of other products the reverse was true. Notably in wheat production new methods had been applied on a greatly increased acreage, not only in the United States, but in Argentina, Canada, Australia, and Europe, with the result that world wheat production increased more rapidly than world population. Strange to say, when this increase in wheat production passed a certain point, it increased the number of hungry mouths in the world because it decreased the power of the wheat producers to purchase city goods.

When we drew up the Agricultural Adjustment Act in March of this year, we knew, therefore, that we could not raise farm prices to the level we would like all at once. We were familiar with the efforts of the Farm Board and governmental agencies in other countries to hold up prices without controlling the supply. We were determined to avoid joy rides of that sort which cause a headache the morning after when you are faced with increased production, reduced consumption, and tremendous carry-overs which cannot be sold except at

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prices ruinous to the producer and to all businessmen who depend on the producer.

Purchasing Power

In brief, our problem since March 4 has been to increase the purchasing power of the farmer as rapidly as possible without creating an untenable supply and demand situation which would cause grief to the Nation later on. Previous to 1929 this country normally exported more than one half her cotton, one third of her lard, 40 percent of her tobacco, and about one fifth of her wheat. More than 50 million acres of our crop land has been producing stuff which finds its market overseas. A large part of this overseas market seems to be lost forever. This fact was hidden from 99 percent of the people of the United States up until 1929 because we lent to foreign nations from 500 million to a billion dollars annually. In effect we lent Europe the money with which to buy our goods.

Cotton

The first crop we were able to handle under the Agricultural Adjustment Act was cotton. During the first 4 months of 1933 the price of cotton was less than one half fair exchange value and the carry-over was nearly 3 times the normal. We decided that the welfare of the South and the Nation as a whole demanded that the cotton crop be reduced in line with the changed world picture.

The 2,000,000 cotton farmers of the South had no way of going at this problem, so we stepped in under the powers of the Agricultural Adjustment Act and paid them for plowing under 10 million acres, or about one fourth of the crop. The checks for doing this were sent out in September and October and at the present time business in the South is running far ahead of a year ago. Farmers rarely keep their money; they spend it in ways which put laboring men to work.

The greatly increased demand from the cotton South is one of the truly bright spots in the national picture today. Undoubtedly the cotton and tobacco growers will have at least 300 million dollars more spending power in the crop year which began August 1, 1933, than they would have had without the action taken by this administration.

Higher Farm Income

For the Nation as a whole, farm income was approximately 40 percent higher this October than in October of 1932; factory pay rolls were around 35 percent above October of 1932. More specifically, consider two industries which depend directly upon increased farm income. In the farm implement business employment and pay rolls this October were double what they were a year ago. In the fertilizer industry there was a 60-percent increase in employment and pay rolls above last October. And in that very sensitive barometer of farm purchasing power—mail-order sales—typical reports I have seen show a 40-percent increase over October of 1932, an increase in exact proportion to the increase in farm income.

In the early fall most of this increase in farm income came from the South, where the efforts of the administration were instrumental in raising cotton and tobacco prices, and where benefit payments to producers got into immediate circulation. In these areas mail-order sales, and business activity generally, rose in some cases to more than double the level of a year ago. I present these facts merely to illustrate the very intimate connection between farm prosperity and an abiding industrial prosperity.

Adjustment of Production

But the truly fundamental thing is not the hundred million dollars in checks sent out but the better adjustment of production to the changed world picture. It is vicious to subsidize any class, even as a compensation for injustice, unless the subsidy results in such a change of productive forces that the entire Nation is better adjusted to the world situation. That is why I have talked again and again to the farmers of the cotton South, the wheat West, and the Corn and Hog Belt of the fundamentals which have to do with the creditor position of the United States and our tariff policy. If they understand that we are in the midst of a tremendous inevitable shift in productive forces, and that the Nation is not handing out money to them as a bribe but as a means of enabling them to make the shifts with the least trouble possible, then I am hopeful that we can develop a feeling of intelligent, national consciousness such as we have never had before. It will be a genuine advance if the farmers can feel that they are a part of the Government and that the Government is a part of them; that we are all pulling together to realize an objective which is good for the farmers, good for the Nation, and good for the world as a whole.

Protection for Consumer

In this connection it is worth remembering that in the act itself there is a special protection for the consumer. The consumer shall not pay to the producer, the act states, a higher percentage of his dollar for agricultural products than he did during the 5-year pre-war period. In other words, the special powers to help the farmer are to be thrown out of gear when prices plus processing taxes reach fair exchange value.

Consumers cannot expect to be fed indefinitely at prices which represent a return to the farmer so low as to make it impossible for him to buy his customary quantity of city products. The farmer can be imposed on in this way for 10 or even 15 years, but after a time the farmer's children learn, even though the farmer himself cannot, that it is wise to leave the farm behind and go to town. Any city population which follows year after year the definite program of paying farmers less than fair exchange value for its food, will inevitably suffer from the most terrible consequences. The penalty paid by the city population during the past 2 years is trivial compared to what will eventually be paid if the shortsighted policy of some of the reactionaries triumphs.

Undisturbed laissez faire in agriculture produces a cycle of the generations. Against the background of the present situation, we might expect laissez faire to result in enough farmers being ruined so that by 1940 or 1945 there might be a world-wide scarcity of food, with multitudes in the cities not only unemployed but hungry. City men who see a factory start up in a day and close down as suddenly forget that agriculture is a slow-moving, ponderous affair. It takes a long while to discourage farmers and force them off the land by injustices, but once that happens it takes just as long to develop good farmers and an efficient producing machine.

Future Program

I hope it will not be necessary for the Government to go on indefinitely levying processing taxes to raise hundreds of millions of dollars to pay to those producers who cooperate in adjusting their agricultural operations to the changed foreign demand. A program of this sort may be necessary for a while, but it is obvious that the long-time solution depends on a sound land policy, or tariff policy, or both.

From a long-time point of view, it is commen sense to produce our crops on our best land and retire from use the poorer land. Millions of acres are now in crops which cannot possibly furnish a decent return to the families living on that land even though agriculture is again given her fair share of the national income. Men living on land of this sort are continually in need of Government charity from seed loans and

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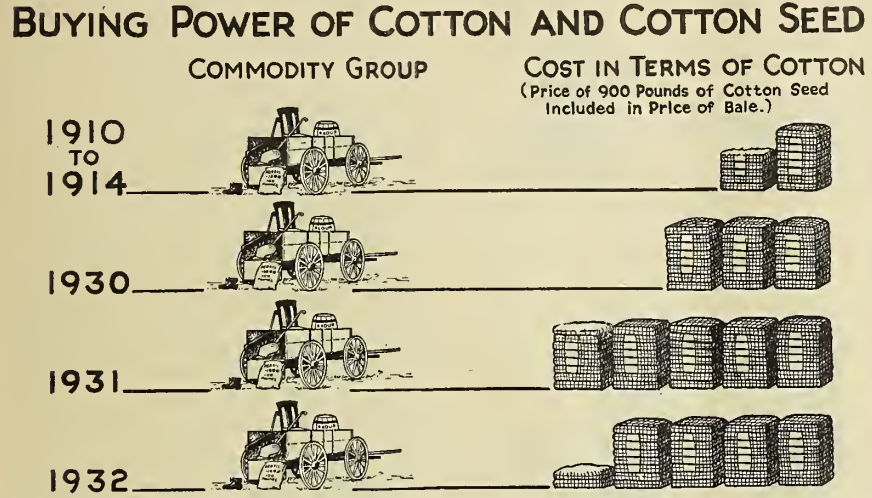
Cotton Production Adjustment for 1934—What It Proposes to Accomplish

CULLY A. COBB

Chief, Cotton Section, Production Division, Agricultural Adjustment Administration



The articles that cost a farmer slightly over one and one-half bales of cotton in the period from 1910 to 1914 cost him three bales in 1930. The large crop of 1931 caused cotton prices to fall still lower, and in that year the farmer had to pay five bales of cotton for the same list of articles. Large surpluses increase the "disparity" between cotton prices and the prices of things the farmer buys. The way to restore the buying power of cotton is to eliminate the surplus. The Agricultural Adjustment Administration's program of production control provides a means to do this. Growers who cooperate with the Government will be helping to bring about the adjustments necessary to restore the buying power of their crop.

LAST SEPTEMBER I wrote in the EXTENSION SERVICE REVIEW: "We have made only a beginning, and among the most valuable of the achievements is the development of a strong and effective group of cotton producers who are ready to execute the new plans and a will to join in a unified effort to that end."

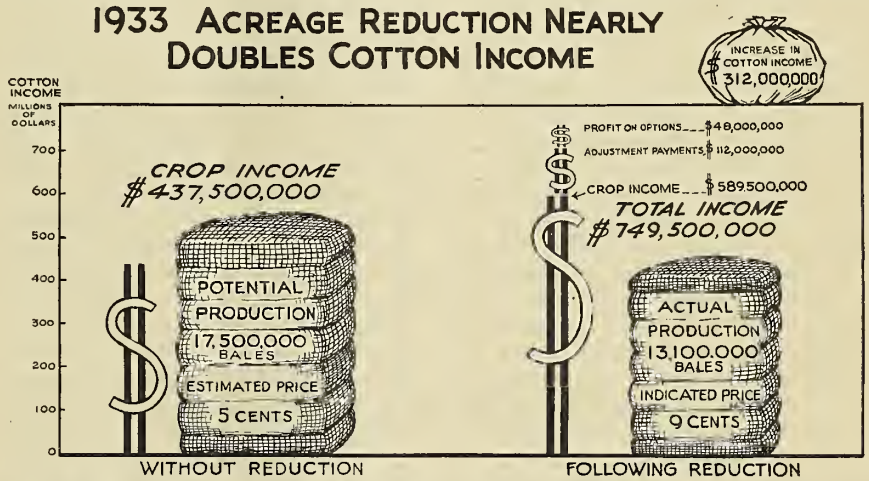
Only a beginning? I certainly do not mean to minimize either the perfectly splendid effort that was expended by the Extension Service in so successfully handling the 1933 cotton plow-up campaign, or the results that were achieved. Both, completely fulfilled our expectations. Even now, months after, when the excitement and enthusiasm of the campaign itself have subsided so that we can examine it in deliberate retrospect, the story of that initial effort of the Adjustment Administration is not only one of amazing accomplishment but a prophecy of other achievements of even more far-reaching importance yet to come.

The 1933 campaign, however, was really just a beginning. It was the initial offering to the American farmer himself of the fundamental idea of production control—producing to meet the demand. And from that proving ground the South, where the idea was first presented to the producers themselves for approval or denial, a million farmers answered "Aye!" A million signed contracts. These million contracts were votes of confidence in the "New Deal" for agriculture.

That in truth was the beginning. Let's see what was accomplished and where that beginning points.

Twelve days after the Agricultural Adjustment Act was signed we met with representatives of the Extension Service, the Agricultural Adjustment Administration, and the Bureau of Agricultural Economics and planned a program for cotton based on the facts we found facing the cotton farmer at that date, May 23. The facts were these: A cotton supply that had been steadily mounting for years had reached the excessive peak of 26 million bales.. A huge crop was in prospect. The supply promised to increase still further unless the emergency was met and met promptly. Gross income from cotton and cottonseed had fallen from 470 million dollars in 1928–29 to 458 million in 1932–33. In January the price of 5.6 cents per pound for cotton was 7.2 cents per pound below what it should have been to have had the same purchasing power it had during the pre-war period.

You know what we decided to do. On June 19 the plan to eliminate 10,000,000 acres, or at least 3,000,000 bales, from the 1933 crop was announced. Four days later the first contract form was approved, and the Extension Service had



This graph shows what happened when the cotton grower cooperated with the Agricultural Adjustment Administration to reduce the cotton acreage in 1933. Had it not been for the plow-up campaign and the fine spirit of cooperation exhibited by southern growers, disaster would have befallen the Cotton Belt in the fall of 1933. The above graph tells this better than words. A potential yield of seventeen and one half million bales was reduced to thirteen and one tenth million bales by the action of the Agricultural Adjustment Administration, and, as a result, the income that the cotton grower received from his lint cotton was nearly doubled. Realizing these facts, cotton growers are expressing a desire to cooperate in future adjustment programs.

been drafted and was at work—the only agency that could be mobilized that could possibly handle the huge task. By July 14 the 22,000 local workers under the supervision of the Extension Service, in more than a thousand southern counties, had met with such success that the Secretary declared the program to be in effect.

About 10,400,000 acres, or 4,400,000 bales of cotton were taken out of production. More than a million cotton farmers signed contracts and cooperated in the plan. As a result, instead of the 17,600,000 bales that would have been harvested, according to the December 1 estimate of the Crop Reporting Board there were 13,177,000 bales. Instead of a supply of 29,200,000 bales, or about 3,000,000 bales more than the previous year's disastrous peak, the supply was about 24,800,000. Actually a reduction of 1,200,000 bales in the world supply of American cotton whereas conditions had been leading to an increase of 3,200,000 bales.

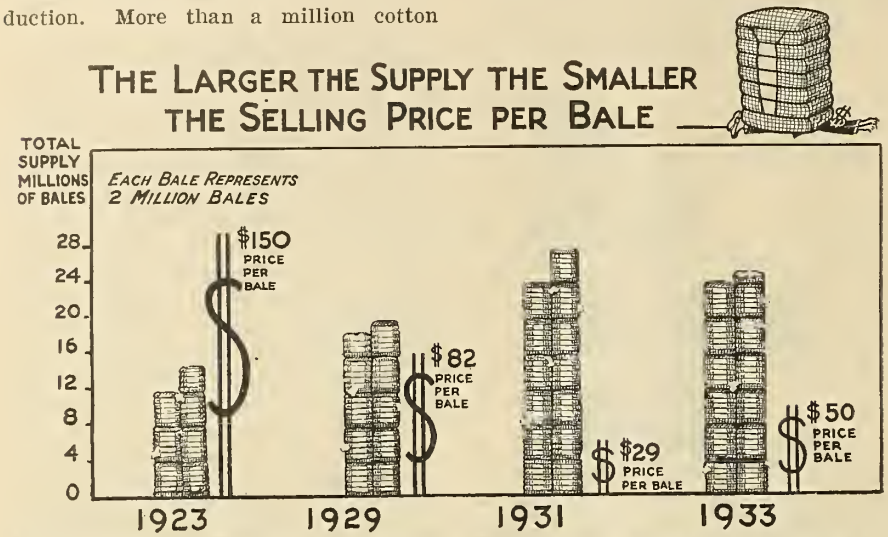
The result in dollars and cents can be figured in this way: The average price that farmers received in November was 9.6 cents per pound. Even at 9 cents per pound, however, the 1933 crop of 13,200,000 bales has a value of 594 million dollars. Add to that the 112 millions the farmers have received in benefit payments and the 48 million in profits on cotton options and there stands a total income from lint cotton for the present crop of 754 million dollars—the most valuable crop since 1929 when the price was 16.8 cents per pound!

At 5 cents per pound, which is about where cotton would have sold had there been no 1933 reduction and no prospect of future reduction, the unrestricted crop of 17,600,000 bales would have had a value of only 440 million dollars. That is 314 million dollars less than the income really is.

This extra 314 million dollars has turned the tide toward better times. The farmer had seen his average gross farm income for cotton and cottonseed shrink from $735 in 1928–29 to only $216 in 1932–33 and with it the loss of buying power and the coming of hard times. Cotton farmers are spending that money for things they need and business throughout the belt is the best in years. Bank clearings for the last week in November show an increase in Atlanta and Dallas of 43 percent over the same week last year, as compared to an increase of 17 percent for the country as a whole. In addition to actual money evidence there is among southern farmers a renewed sense of security and a confidence in whatever further effort the Government may make to restore sound economic conditions.

That is the beginning I spoke of so hopefully in the September number of the Extension Service Review. I considered it as a beginning because, in spite of the plow-up campaign of last summer, there is still a surplus of cotton. We are now building from that beginning. We are building toward a permanent cotton production control program. We are building for a better price and for better days. The program is designed first of all to eliminate the excessive cotton supply.

Briefly, the 1934–35 cotton-control plan contemplates reducing the 1934 acreage to 25 million acres. The farmer agrees to reduce his 1934 acreage by not less than 35 percent nor more than 45 percent below his base acreage. He also agrees that, if necessary, he will hold his 1935 acreage to as much as 25 percent below his base acreage. His base acreage is, roughly, his 5-year average. For this contracted acreage the grower is paid at the rate of 3½ cents per pound on the average yield per acre for the past 5 years, with a maximum of $18 per acre. This rental payment will be made in two equal installments, the first to be made this spring and the second between August 1 and September 30, 1934. The grower also gets a "parity" payment of not less than 1 cent per pound on his farm allotment, which is 40 percent of his average base production. Rented land must be of average productivity. The grower may not increase the acreage of other basic commodities above that planted in 1932 or 1933. This provision also includes livestock or their products as designated in the act.



More cotton but less money from it. Farmers know this, but heretofore there has been no method by which they could be assured of full cooperation by all growers all over the belt in reducing acreage. The Agricultural Adjustment Administration offers such a method now, and the grower who will cooperate will be paid for his cooperation. As a result, the whole Cotton Belt will benefit, the surplus will be reduced, and the outlook for the future will be brightened. A study of this graph should naturally cause the farmer to pause before he produces cotton in excess of consumptive requirement.

Using as a nucleus the Extension Service and the 22,000 volunteer workers who served so successfully in the previous campaign, it is our hope to effect the sign-up with little difficulty and restrict the 1934 cotton planting to 25 million acres.

We are better prepared to do the job than we were in those trying weeks of pioneering last June, when both the organization here and the State and county organizations in the field were all in the process of development. Every State in the Cotton Belt has a supply of contracts. Each of the Directors of Extension advises me that the State organizations are ready to begin signing contracts on January 1. Furthermore, we have a history of a similar achievement done, a record to guide us, a knowledge that the producers, the farmers themselves, are ready for the program and want to cooperate.

AN IMPROVEMENT thinning of a dense white pine stand in Franklin County, Maine, yielded the owner, W. H. Thomas, 500 board feet of lumber and 8 cords of fuel wood from a quarter of an acre. The lumber went into the building of a henhouse, and the fuel wood went to the furnace. With 2 additional cords, it was enough to keep the house warmed through the winter. The best trees, at the rate of 628 per acre, were left for future marketing. Every tree left was pruned one log high. The improvement cutting paid for itself in fuel and lumber. It will result in shortening the growing period several years and will improve the grade of the yield from box material to high-grade lumber.

Seventy Years of Preparation for Seven Years of Service

J. A. EVANS
Associate Chief, Office of Cooperative Extension Work

"SEVENTY YEARS of preparation for 7 years of service" is the way Dr. Wallace Buttrick epitomized the life of Dr. Seaman A. Knapp, the "Father of Extension Service" who was born just 100 years ago, December 16, 1833. This seems a fitting time to recall the early history of extension work and something of the life, teachings, and philosophy of its founder.

He was born in a New York village, graduated at the age of 23 from Union College, Schenectady, N.Y., and for the next 9 or 10 years was engaged in teaching in that State.

Then fate in the form of an accident and impaired health, caused him in 1866 to emigrate to Iowa and settle on a farm. But his health was not equal to the task of farming. Moving to Vinton he served as pastor of the Methodist Church for 2 years and was for 5 years superintendent of the State school for the blind. During most of this time he was an almost helpless cripple confined to a wheel chair.

His health restored, he resigned to engage in raising purebred livestock and the editing and publishing of a livestock journal. He was elected professor of agriculture at the Iowa State Agricultural College at Ames, Iowa, in 1879 and later served as its president. In all, 20 busy fruitful years of his life were spent in Iowa. His final resting place is on the campus at Ames.

Development Project

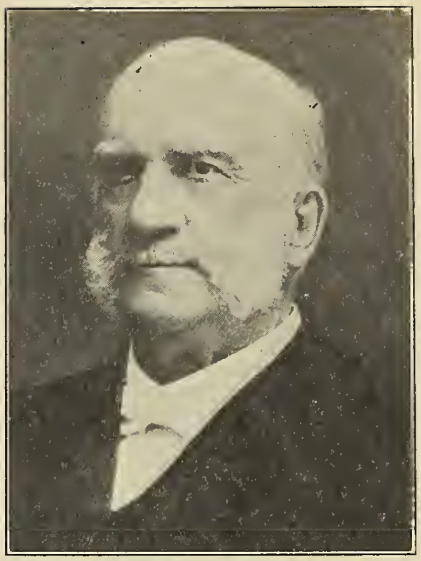
In 1886 he moved to Lake Charles, La., to take charge of a colonization and development project involving more than a million acres of land, then a vast prairie cattle range sparsely settled by French Canadians. These natives did not believe that the area was fit for farming and took pains to tell prospective settlers so. Settlement seemed impossible, but by giving large concessions a thrifty, energetic western farmer was located in nearly every township to demonstrate the soil's capabilities. This turned apparent failure into success. "We then learned the philosophy of agricultural demonstrations," said Dr. Knapp years later in recounting this experience.

In 1898 his old Iowa friend, James Wilson, then Secretary of Agriculture, commissioned him as an agricultural explorer to visit Japan, China, and the Philippines to hunt for new and better varieties of rice. As a result, Japanese rice was introduced. A demonstration was used to introduce and popularize the new varieties. Thus began the official connection with the United States Department of Agriculture, which continued until his death. It was this connection that afforded the inspiration and opportunity for his greatest work. How to use the demonstration for mass educational purposes was being studied, both by Dr. Knapp and others in the Department.

Demonstration Farms

In 1902 a number of demonstration farms were established in Texas and Louisiana for the purpose of showing what could be done in different areas in growing crops other than cotton. These were regional demonstration farms in charge of salaried operators under Dr. Knapp's supervision. He was not satisfied. In 1903, he tried another type, the community demonstration farm, near Terrell, Tex. Here the owner operated the land at his own expense according to plans and directions provided by Dr. Knapp. The community, in this instance the business men of Terrell, raised and deposited in the bank $900 to guarantee the farmer against loss. It was not needed. The farm was a success. The owner, Walter Porter, reported that he had made $700 by following instructions.

Dr. Knapp now felt that he had an effective plan for carrying the results of agricultural research to farmers by demonstrations. The invasion of the Mexican cotton boll weevil afforded the opportunity for a wide-scale test of its effectiveness. Congress was expected to provide funds to combat its ravages. Plans were being laid in the Department of Agriculture for the campaign. From a great boll weevil mass meeting at Dallas, Tex., in November 1903, the Secretary and bureau chief went with Dr. Knapp to visit the community demonstration farm. Hundreds of farmers and business men met there. Then and there plans were laid to use the community demonstrator as one method of attack on the boll weevil problem, supplemental to other plans involving research and investigations.



Seaman A. Knapp.

Farmers' Cooperative Demonstrations

On January 15, 1904, when funds became available, the farmers' cooperative demonstration work, with Dr. Knapp in charge was officially begun. The demonstration farms under the plan adopted were tracts of from 5 to 20 acres planted to cotton and cultivated by individual farmers, the seed and fertilizer being furnished free from a fund raised in the community. More than 5,000 such farms were established and supervised in Texas that year by Dr. Knapp and his agents.

There was one more step in the evolution of the demonstration idea. "The environment of farmers is limited generally to a few miles. The demonstration must be carried to this limited area", he said. So after 2 years the community demonstration was abandoned for individual demonstrations.

The cooperation of business men and others took the form of aiding in the employing of agents rather than in providing seed and fertilizers for demonstration purposes. The county agent had arrived. The first one to be appointed was W. C. Stallings in Smith County, Tex., in November 1906. The General Education Board of New York, seeking the best means for imparting agricultural information to adult farmers, then decided that in the demonstration work they had found the answer they sought. In April 1906, the board agreed with the Secretary to finance the work under Dr. Knapp's direction in Southern States not yet invaded by the boll weevil. Work was immediately started in Mississippi, Alabama, and Virginia, and in the next year or two in all the other Southern States. Nearly a million dollars was

spent by the board prior to 1914 in promoting the demonstration work as an experiment in adult education.

Corn and other crops were now included in the demonstrations, but cotton farmers were loath to grow corn. The boys' corn clubs were the answer to this problem. The unit of production in these clubs was 1 acre so that it was a real farm enterprise, and as on all other demonstrations records of yields and costs were required. His were the first clubs ever started where the unit of production was of a standardized farm-enterprise size and on an economic and demonstration basis. These boys' corn clubs mark the inception of the great youth movement now known as the 4-H clubs. Then followed the girls' tomato club and later home demonstration work, all on a demonstration basis. Meanwhile the necessary organization developed as the work expanded. Then it was that Dr. Knapp said, "We are now prepared for the accomplishment of what we have so earnestly sought—the placing of rural life on a plane of profit, influence, and power."

Dr. Knapp's headquarters were moved from Houston, Tex., to Lake Charles, La., and in 1908 to Washington, D.C. State agents, district agents, State club agents, and specialists were added to the organization.

Agricultural Colleges Cooperating

In 1909, with the launching of the boys' corn clubs, the agricultural colleges of the respective States first became formally connected with the administration of the work through the cooperative employment by the colleges and the United States Department of Agriculture of State club agents. This was soon followed by cooperative agreements for the joint conduct of all demonstration work with headquarters for the State agents at the agricultural colleges.

Thus before his death, April 1, 1911, the cooperation, organization, personnel, methods, and scope of extension work as it is today, had been evolved by Dr. Knapp. The Smith-Lever law gave the farmers' cooperative demonstration work a new name, assured support, and made it national in scope, but changed no essential feature of it.

No full biography of Dr. Knapp has yet been written. Senate Document No. 537 contains in full the addresses delivered at the memorial service held during the annual convention of the Southern Commercial Congress in 1912. The Department of Agriculture Yearbook for 1911 also contains a brief biographical sketch prepared by his chief, Dr. B. T. Galloway. Other valuable sources of information are the book The Demonstration Work and other writings by one of Dr. Knapp's most devoted disciples, O. B. Martin, now extension director in Texas.

The demonstration idea as we have seen was not a sudden inspiration. It was elaborated through years of study and of experiments. Dr. Knapp was a pioneer. Step by step he thought out, tested, and adopted the various features of the full plan. The program of the Extension Service is a constantly expanding one. As never before, we are called on to be pioneers in the intensified effort "to harmonize a democracy of men with a monarchy of business. The revolution must continue until the problems of poverty are solved, the measure of human happiness full, and America shall possess a yeomanry worthy of a great nation."

Florida Women Live at Home

DEMON HUNGER will hardly find it possible to invade the homes of rural women of Florida who have been members of home demonstration clubs during the past year; and one of the basic and fundamental requirements of mankind—food—will be supplied to unemployed or "relief" families in appreciable quantities this winter as a result of canning work done during the past several months. Home demonstration agents have rendered valiant and valuable service to rural women, and have greatly aided relief agencies in conducting gardening and canning programs during 1933. As a result, both home and "relief" pantries are stocked to overflowing.

Recently, Flavia Gleason, State home demonstration agent, asked her home demonstration agents to summarize the work in canning and gardening, particularly in connection with unemployment relief agencies. Figures from 7 counties, which are fairly average, show that 211,840 cans, an average of 30,263 to the county, had been filled. In some of the larger counties, as many as 60,000 cans had been filled, while in the smaller counties the number dropped as low as 10,000.

The program carried in Bradford and Union Counties is typical of the work in other counties. Pearl Jordan is home demonstration agent serving both of these counties. At the annual conference of agents in the fall of 1932 the problem of assisting the live-at-home program in the counties was presented as being among the most important services which the home demonstration agents could render. A self-supporting people was her aim throughout.

The plan was presented to both women and girls in home demonstration clubs, stress being laid on the production and conservation of vegetables, meats, and fruits from the standpoint of both health and finances. Families were assisted in planning their canning budgets, that the needs of each family might be met adequately. Reports show that over 24,000 cans were preserved by home demonstration women only, with reports from the girls not yet received.

At the request of the Emergency Relief Council, Miss Jordan and the home demonstration club women took key parts in the gardening and canning work of this agency. A canning center was established in each community, with committees of home-demonstration women arranging places for these centers and looking after the details of the canning. County supervisors had general charge of the work.

The relief agency agreed to furnish the cans, but the question of canning equipment then had to be settled. In Bradford County all available equipment was assembled, placed on a small truck, and carried from center to center by the supervisor. In Union County smaller units were obtained and given to three different supervisors, who carried the equipment from place to place.

The supervisors had regular schedules each week, and people brought their fruits and vegetables to the canning centers and canned them, with the relief agency taking a toll for furnishing the cans and equipment. Miss Jordan's records show that 24,000 cans of beans, peas, soup mixtures, corn, butter beans, carrots, and many other vegetables and fruits were canned.

With at least 48,000 cans stored in pantries of the two counties as a result of home demonstration assistance, the people of the two counties feel that when winter comes they will hardly need to be apprehensive about hunger.

FARM WOMEN of Colorado who are members of home demonstration clubs are eligible to enter the Colorado recognition contest, a letter or story-writing contest on the subject, "How I Helped Solve Our Family Problems in 1933."

Easing the Farm Mortgage Burden

An Interview with Albert S. Goss, Land Bank Commissioner in the Farm Credit Administration

THIS is the third of a series of articles on the New Deal in farm credit. The fourth and last article will be on how the new banks for cooperatives are making loans.

ALBERT S. GOSS, Land Bank Commissioner in the Farm Credit Administration, heads an organization that is doing one of the most spectacular pieces of work attempted in the farm mortgage field.

As head of the Land Bank Division of the Farm Credit Administration, he and his staff are bringing mortgage relief to farmers at the rate of some $3,000,000 a day. This rate was for the latter part of November. It's a lot of money for any institution to be lending on a daily basis, but the daily rate for December is expected to be even greater. From early May until late November, his organization lent farmers more than $100,000,000. In 6 months, about 415,000 farmers applied for loans from the land banks estimated to total $1,665,000,000. The number of appraisers jumped from 212 in April to more than 5,000 in November. In 6 months they made over 300,000 appraisals.

No wonder I wanted to interview Mr. Goss. With his background as a farmer, a business man, master of the Washington State Grange, and chairman of the legislative committee of the National Grange, he must have a story for extension workers.

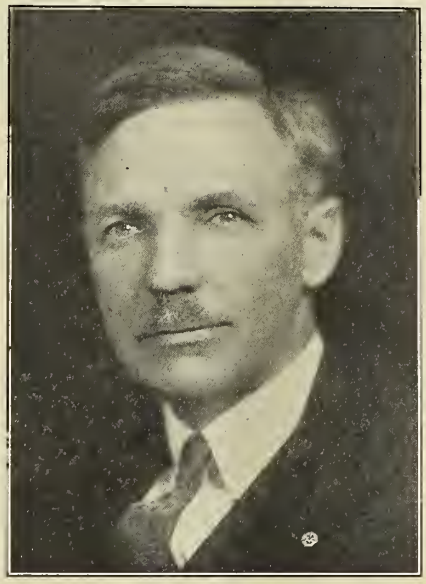
On entering his office, I found a man of slight build, gray-haired, of about 50. Attractive, likable, his blue eyes smiled when I sat down to ask a few questions I thought might be of interest to county agents and specialists.

"What", I asked, "is new about the way Federal land banks and the Land Bank Commissioner are making loans?"

Mr. Goss turned in his chair. "You'll remember when the Emergency Farm Mortgage Act was passed back in May that it tackled the farm-debt problem in a pretty thorough way. The act did four things. It gave the banks authority to obtain funds through the sale of a new type of bond, reduced the interest rate on loans, declared that no principal payments will be required for the 5-year period, ending July 11, 1938, and made available a $200,000,000 fund for the Land Bank Commissioner to lend."

"What about the reduced interest rate? Can all farmers get it?"

"Yes. The rate is reduced temporarily for all borrowers from the Federal land banks. Starting with July 11 of 1933, interest maturing during the next 5 years will be charged at the rate of 4½ percent. This applies to loans made through national farm loan associations. On direct loans by the Federal land banks during this time, the rate is 5 percent. The same rates of



Albert S. Goss.

4½ percent on loans through associations and 5 percent on direct loans are charged during the 5-year period, if the farmer borrows before May 12, 1935."

"Let me see", I interjected, "the old rate charged by the banks varied from 5½ to 6 percent on first mortgages. That means that a farmer paying 6 percent interest on a $20,000 mortgage will save $300 a year on interest payments if he borrowed through a farm loan association, doesn't it?"

"Precisely. And if the farmer is not in default with respect to any other condition or covenant in his mortgage, he will not be required to make any payments on principal. This suspension of principal payments holds for the same periods on which interest charges have been reduced. It also applies both to loans made through associations and to direct loans from the banks.

"The act also provides that farms offered as collateral shall be appraised on the basis of normal value. This means a value neither abnormally low nor abnormally high. In determining the normal value of the land for agricultural purposes, average prices of farm commodities for the period 1909 to 1914 are used. Allowance, of course, is made for increased taxes and other costs and for changes in the economic position of the products produced which affect the earning power of farms."

"So far, Mr. Goss, you have covered reduced interest rates, deferred payments on principal, and how appraisals are made, but how are loans made from the $200,000,000 fund of the Land Bank Commissioner? Just where does it fit into the scheme of things in the farm credit field?"

"Well, the Commissioner is using the services of the Federal land banks in making loans from this fund. The loans are made on the security of first or second mortgages on farm property. But most commissioner's loans are made on second mortgages. The amount of the loans plus all evidences of indebtedness against the property cannot exceed three fourths the apprised value of the property. Loans by the Commissioner carry 5 percent interest charges, are made directly through the facilities of the banks, usually run for 13 years, and are mostly made for refinancing purposes.

"In applying for a loan, the farmer need not indicate whether he wants a land bank or a land bank commissioner's loan. He can fill out one application blank. Then when the property is appraised, the land bank officials will determine whether a land bank or a commissioner's loan, or both, can be made. They will write the applicant their decision and let him know how much they will lend."

A FARM-OWNED stand of thick old field spruce yielding returns at the rate of $97.50 per acre was partially cut during an improvement thinning demonstration in Waldo County, Maine, last year. The trees were marked by the State extension forester in 1931, and the cut on an eighth of an acre was at the rate of 19,504 board feet. The stumpage price was $5 per thousand. A stand of 216 trees was left, containing more than 40 percent of the total volume, for a future harvest.

Eighteen Years of Soil-Erosion Control

A timely discussion by S. P. Lyle, Federal extension agricultural engineer, on a subject of growing importance as production control brings up the problem of land use

THE STATISTICAL records of the Office of Cooperative Extension Work disclose a remarkable record of 18 years of erosion-control work, marking the advent of an epoch in our agricultural history. The agricultural engineering records, tabulated and graphically illustrated here, give the most direct measurement of the magnitude of the work accomplished because the figures relate exclusively to erosion control by means of terraces and soil-saving checks and dams. The magnitude of other erosion-control activities of the Extension Service may be inferred from this record, and may be estimated from records of forest, pasture, cover crop, and other erosion-resistant plantings which apply only partially to erosion control. The entire result should be kept in mind, for extension workers have continually and consistently correlated the recommendations not only for erosion control but also for erosion control followed by soil improvement.

In noting the progress in this work, extension workers may well take pride in their own effectual educational participation, and at the same time congratulate their colleagues in research work for having formulated principles of erosion control so well suited to farm practice, and also acknowledge the contribution of the teachers who have furnished the informed leadership for the work.

The consensus of opinion among workers upon erosion-control problems from all of these groups is, broadly speaking: That forests effect the most satisfactory protection for steep slopes; that perennial pastures are very effective on moderate slopes; that in every agricultural area there is a rather definite limit to the steepness of slope for economic use under cultivation; and that these gently sloping cultivated fields require terracing, contour farming, and erosion-resistant and soil-improvement crops; and that nearly level lands may be protected with suitable cropping practices.

Slopes Terraced

On cultivated fields with slopes of over 2 percent, terraces have been recommended consistently by extension workers throughout the South and Central West, and in these areas during the past 18 years county agricultural agents have reported terracing and gully-control work protecting 17,038,715 acres on 558,316 farms. As will be seen on the accompanying graph of this record, it is a reasonable assumption that the work performed in 1933 will bring this total acreage to over 18,000,000 acres on 600,000 farms. This area is almost equal to the total acreage in crops in the State of Illinois or to the total area of South Carolina. Over 16,000,000 cultivated acres of this vast area is terraced and planted in contour rows, supplemented with a very general use of cover crops. The terraces laid off on this acreage under extension supervision total a mileage that would girdle the earth 65 times.

Last year a survey was conducted jointly by the Oklahoma and Texas Extension Services to arrive at a fair average cash value of terracing on a per acre land-valuation basis. One hundred and sixty-one county agricultural agents and farm-loan appraisers submitted the following tabulated estimates:

Cash value of terracing

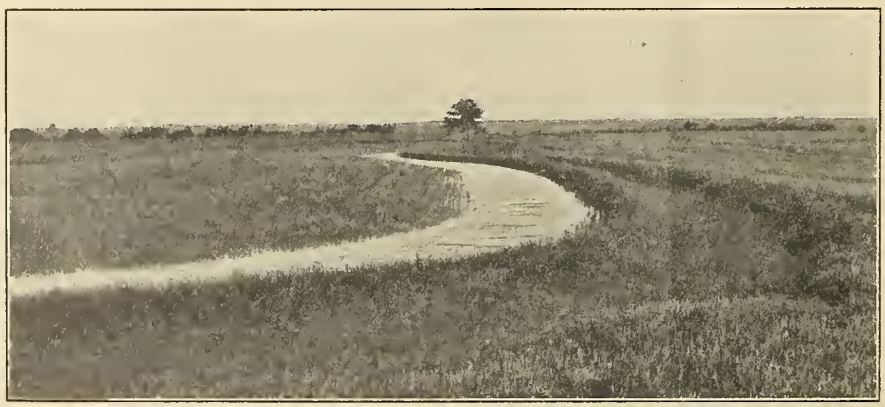
Estimates submitted by—	Per acre average
42 Oklahoma county agents	$8.58
24 members, Oklahoma farm real estate associations	9.64
38 Texas county agents	7.98
49 Texas National Farm Loan Association secretaries	8.08
8 Texas farm mortgage institutions	10.54
Average valuation of 161 estimates	8.54

Value of Terracing

This estimated value seems conservative even in the present economic situation, as 6 percent income on this valuation is only 51 cents. Surely their insurance value in retaining 30 to 40 tons of top soil per acre annually upon cultivated fields is worth a half dollar a year per acre to land owners or the holders of land securities. But, farm operators testify to greater income values due to increased yield. In this connection due credit should be given to the other erosion control, water conservation, and soil improvement practices which should, and usually do, accompany terracing.

It is also important to note that this well-warranted valuation of terraced land is more than double the current cost of custom work in terracing, from Alabama to Texas. These prices, as reported by county agents, have ranged between $2 and $3.50 per acre. Home-built terraces range from $1 to $1.75 per acre, and large operations with county road equipment on slight slopes have ranged from 40 cents to $1.25 per acre. These are construction costs. The surveying has usually cost farmers nothing except their own time. Custom surveying on small rough fields need not cost more than 25 cents per acre, and on larger and smoother fields half as much.

The accompanying graph of terracing work is interesting, viewed in its relation to economic curves. The drop in terraced acreage in 1920 corresponds in time to what has been characterized as the "primary post-war depression." The steady gains of the extension workers through the succeeding 9 years were not as easily offset in 1930 by the second post-war depression, and we see slight increases in 1930 and 1931 in spite of the



Run-off from a single terrace in an Oklahoma oat field.

Field meeting to inspect a terracing demonstration in Iredell County, N.C.

unfavorable influence of the depression upon the farmers' programs of land improvement. Although 1932 shows a significant decrease, it is refreshing to know that the statistical records of eight States show increases in terraced acreage in 1932 over their figures for 1931.

Number of farms on which erosion was controlled by terraces and soil-saving dams according to extension recommendations, and the number of acres on which erosion was thus prevented

RECORDS FROM THE SOUTHERN STATES FOR 8 YEARS

Year	Farms	Acres
1915	7,335	202,706
1916	14,735	463,866
1917	20,439	420,322
1918	24,049	624,668
1919	30,088	1,243,696
1920	17,759	312,720
1921	22,335	413,864
1922	28,937	544,641

RECORDS FROM 45 STATES

1923	21,028	684,156
1924	24,452	819,072
1925	26,960	902,225
1926	33,548	1,016,972
1927	41,183	1,140,587
1928	45,059	1,349,436
1929	61,199	1,819,282
1930	46,275	1,843,165
1931	48,717	1,870,174
1932	44,218	1,367,163
18-year totals	558,316	17,038,715

A CONSERVATIVE ESTIMATE OF THE TOTAL INCLUDING THE WORK NOW COMPLETED IN 1933 IS—

19-year estimate	600,000	18,000,000

If the relation of economic factors to the rate of progress in erosion control is interesting, the relation of educational instrumentalities should be of even greater interest to extension workers. To begin with, terracing and the other erosion-control activities were not inaugurated by the Extension Service and it would be fitting, if space permitted, to recount here the efforts of farmers to combat erosion, the early attention paid to the problem by the Department of Agriculture and the agricultural colleges; a citation of early publications; the development of the Mangum terrace; the engineering terracing investigations and demonstrations of the Office of Experiment Stations at the beginning of this century; and the effective terrace demonstration work performed by extension workers of the Department of Agriculture, the agricultural colleges and experiment stations prior to the passage of the Smith-Lever Act. Probably 2,000,000 acres of land were protected by bench terraces, and hillside ditches, and an equal acreage by Mangum terraces prior to the first terracing records of the Extension Service in 1915.

Progress Made

The graph shows the immediate influence of the Extension Service, however, upon terracing in 1916 with a faltering in the advance in 1917 probably due to the importance of war-emergency activities. Some State extension publications on terracing had by this time appeared, but what extension workers needed most at this time to promote the work of erosion control was a Federal bulletin on the subject of terracing, and this was forthcoming the same year. U.S. Department of Agriculture Bulletin No. 512, entitled "Prevention of the Erosion of Farm Lands by Terracing", published the day prior to the United States entry into the World War, furnished an exposition of the engineering aspects of hillside drainage which has served as a source reference for about 18 Federal and State bulletins on terracing used by extension workers since that time. A year

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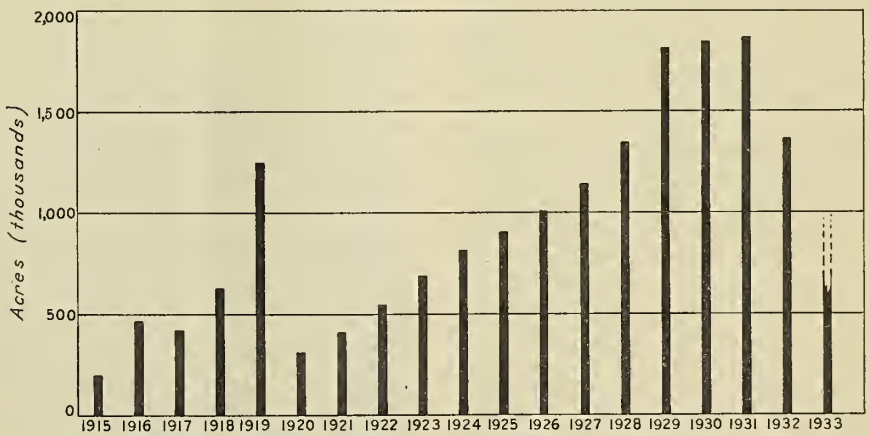


Annual increases in acreage protected from erosion by terraces and soil-saving dams.
(From records of the Office of Cooperative Extension Work, 1933.)

State Home Demonstration Agents Confer on Cotton Program

STATE home demonstration agents from the 12 Southern States and Missouri met with officials of the Agricultural Adjustment Administration in Washington, November 16 and 17, to discuss the existing situation in their respective States and how home demonstration workers can help in the cotton adjustment campaign.

The concensus of opinion at the conference is represented in the following objectives adopted by the conference and drawn up by a committee on records composed of Mildred F. Horton, of Texas, Connie J. Bonslagel, of Arkansas, Lonny I. Landrum, of South Carolina, with Reuben Brigham, of the United States Department of Agriculture, chairman.

Home-demonstration forces should seek:

1. To give every community in the South an understanding of the cotton-production adjustment program and what it seeks to accomplish in obtaining increased farm buying power and improved standards of living. To make clear, in particular, the nature of the obligation incurred in contracting acreage to the Government and to stress the fundamental idea that to insure production control this acreage must be devoted, primarily, to crops preventing soil erosion, improving soil fertility, and providing food and feed for consumption on the farm where grown.

2. To give to each community, as suggested by Secretary Wallace, an understanding of national and international problems and situations as they relate to agricultural adjustment and how they affect the affairs of the individual farm family.

3. To continue to promote vigorously the growing and preservation of home food supplies and to encourage every farm family to provide for its own use milk, eggs, fruit, vegetables, and home-grown meats in adequate quantities.

4. To continue to encourage wise spending and such economies in buying and making clothing as will contribute to the maintenance of a satisfying standard of living and a feeling of respectability and competence on the part of the farm family.

5. To continue to encourage the beautification of the home both within and without as a necessary part of maintaining a satisfying standard of living and strengthening the morale of the farm family.

NEXT to soil improvement no phase of agriculture in Anderson County, S.C., has made greater progress than poultry production, says S. M. Byars, retiring county agricultural agent. Before the Extension Service got behind the poultry project little poultry was raised, and that was of inferior quality. In recent years there has been an annual shipment of 10 cars to outside points in addition to supplying a greatly increased demand on local markets. The value of poultry and eggs produced in the county is estimated at $800,000 per year.

"Not only has there been a great increase in the quantity, but likewise the quality has improved", Mr. Byars says. "Foreign buyers state that the quality of poultry offered on our cars is as good as that offered in any of the Corn Belt States. Good quality and heavy tonnage always enable us to get a good price for our poultry."

Eighteen Years of Soil-Erosion Control

(*Continued from page 121*)

later Farmers' Bulletin No. 997, since superseded by Farmers' Bulletin 1669, Farm Terracing, supplied the extension need for a simpler text for popular use. In 1919 extension workers made an outstanding record in terracing.

Following the depressing effect of economic conditions in 1920, and despite a general migratory movement of farm population from the Southeastern States, the rate of terracing steadily increased until 1929 and held that rate consistently through 2 years of the depression. During this period more experimental evidence had been released on the erosion problem, and public attention had been forcefully directed to the erosion problem by State and Federal research scientists, and statesmen, as well as extension workers, with the result that new studies in all aspects of erosion control were authorized to be made on 10 experimental farms, in typical eroding soil areas, under the joint auspices of the Bureau of Chemistry and Soils, the Bureau of Agricultural Engineering, the Forest Service, and certain State experiment stations. These farms by supplying new and useful data on the effectiveness of various protective measures have doubtless done much to sustain the rate of terracing since 1930, as well as to influence a wider application of vegetative control measures.

Agencies Cooperating

Three new factors are affecting the erosion-control program of the Extension Service this year. The first of these is the erosion-control work of the Civilian Conservation Corps, under the technical direction of the Forest Service and the Bureau of Agricultural Engineering. The Extension Service officially offered its cooperation in this work and from its beginning has furnished specialists in agricultural engineering, forestry, soils, and agronomy to assist in formulating the programs, and with other extension workers to correlate the results with the related extension activities in the communities affected. The second factor is the 40-million-acre program of the Replacement Crops Section of the Agricultural Adjustment Administration. Special precautions must be taken to protect these lands from erosion. Every acre that farmers will plant in trees should be so protected. Every acre they are willing to protect with permanent pasture or meadow should be planted in grasses or suitable legumes. The remaining cultivated acreage should receive the extension workers' first attention in erosion-control work, for neglected fields are most vulnerable to the ravages of erosion. The third factor affecting extension erosion-control work this year is the establishment of a new erosion-control service in the Department of the Interior. This service on watersheds in a number of States should influence farmers to expend greater efforts to combat erosion.

The Extension Service has 190 trained specialists to promote the conservation and even the reclamation of eroding land by means of terracing and soil-saving dams, suitable cropping practices and reforestation. It has a corps of agricultural agents to work in almost every county in our Nation. It is the extension agency for the greatest staff of agricultural research workers in the world. It has accomplished a great work in protecting over 18,000,000 acres on nearly 600,000 farms, with other protection in plantings not specifically recorded. What will the Extension Service do with its new opportunities? What will be its erosion-control acreage in 1934—its twentieth year of record? Can we not by then summarize the measure of complete erosion control achieved?

Oklahoma County Stimulates Terracing

C. S. Sullivan.

WHEN a public-spirited man comes to the assistance of an extension program with substantial cash contributions, the door is opened for effective work. Assisted by such support, C. S. Sullivan, county agent in Seminole County, Okla., is making terracing effective in his county. The same support is being extended to other counties.

In 1931 Dr. W. E. Grisso, Seminole, Okla., offered $1,000 in gold as prizes for the best-terraced farms in Seminole County. The terraces were to be new or reworked during the year. More than 100 farms entered the contest, and 42 completed the program. Tollie Collins won the $400 first prize on his 80-acre farm.

That year more than 5,000 acres were terraced in Seminole County, the next year about 8,000 acres, and in 1933 about 11,000 acres. This terracing program, given an impetus by the contest in 1931, is being put over by community committees, Sullivan insists. The county committee is composed of the seven township committees. Each township committee has five members. These committees keep up interest in terracing in the community and help farmers who want to terrace.

The county owns 37 farm levels which are lent through the county agent. He has placed them with the township chairman who lends them to the farmers. "Any farmer will drive 4 or 5 miles to get a level when he would not hire one or drive a long distance to the county seat", Sullivan says.

Under the Oklahoma State laws, county road machinery may be used for terracing when not needed on the roads. The regular road crew must run the machinery and the landowner pays their wages and for gas and oil. The use of this large machinery reduces the cost of terracing and provides a way to have the work done locally. When road work is slack, the 18 caterpillar tractors and graders in the county are usually busy on terracing work.

County Agent Sullivan has held many training schools in the county and estimates that 200 men in the county can run lines and build terraces. This year there is a Civilian Conservation Corps soil-conservation camp in the county which is doing much to stop large washes and to provide outlets for terraces.

For 1934, Dr. Grisso is again offering prizes for terraced farms, but on a wider scale. He is offering to contribute $200 to each of six adjacent counties on condition that each raise $800 additional. Each county will hold a contest, offering 19 prizes totaling $800. The amounts will range from $150 for first place to $20 for the lowest. The winners in each of the six counties will then be graded for a grand prize of $600 for first and $300 for second place.

Terraces considered in this contest must have been constructed after September 1, 1933. The Six County Terracing Association, an organization of county agents and prominent men in the six counties, is promoting the contest. Counties to which the offer is made are Hughes, Pontotoc, Pottawatomie, Lincoln, Okfuskee, and Seminole. Three of the counties have raised their money and it is expected that all will take part.

Sullivan has been agricultural agent in Seminole County since 1923. He is promoting a well-rounded agricultural program in addition to the terracing work. The value of this program is being demonstrated now when the returns from the Seminole oil field, once the largest in the world, are decreasing rapidly, but the county still has a sound agricultural development on which to rely.

Using county road machinery to construct terraces in Seminole County, Okla.

Community Improvement

With the two objectives in mind of educating the public to a greater appreciation of the beauty in landscape development, and setting forth the importance of planning the use of land, R. B. Hull, Indiana extension horticulturist, has been actively engaged during the past year.

A series of meetings was arranged by the home demonstration or agricultural agent at some home, school, or church which was to be used as a demonstration in the project. One hundred and fifty-one such meetings were held with an attendance of over 6,700 interested people. Included in this series were field trips for the identification of native trees and shrubs that could be used in the planting plan, which aided in cutting down individual expense and made immediate supplies available.

Each demonstration had a definite planting plan to be followed, and every effort was made to stick to it. These plans proved useful to others in making their own plan.

News articles, mimeographed leaflets, and bulletins were valuable in promoting interest in the project and served well as guides in making the plantings.

A great deal of the success of the enterprise was due to a State-wide conference of civic clubs, which obtained the cooperation and interest of many of the State's most prominent people.

Once the plan had been started and some planting made, the self-interest of those concerned in the community carried it on. The whole group contributed material and labor needed to make the plantings.

Terracing Improves the Land

COUNTY Agent R. S. McEachern, whose work in terracing is described in the following article, died as the result of an automobile accident soon after it was written. Besides getting thousands of acres protected with terraces, Mr. McEachern was widely known for his success in establishing 4-H boys' clubs and in developing one of the best county fairs in east Texas. His State extension office pays the following tribute to his work: "Many people in Leon County were indifferent toward him and his work when he went there. When he left, the citizenship was virtually solid in working for the better agriculture which Mr. McEachern outlined."

THE STORY of marvelous benefits from terracing land is an old one in Texas. Starting years ago with the purpose of saving the land from ruinous gullies, farmers discovered successively that terraces increase yields, conserve moisture, check blowing, and increase profits and land values. Many experience stories verifying these reports have come into the extension service headquarters for years.

But, when Jesse Harcrow's story was uncovered this fall, Texas had the thrill of a new discovery. Living in a wooded eastern Texas county, featured by poor sandy upland soils, Mr. Harcrow has been terracing freshly cleared land that has never felt the plow before. For 3 years he has maintained a cotton yield above 300 pounds of lint per acre while unterraced new land has steadily dropped to unprofitable levels in the same time.

Farming in Leon County, Mr. Harcrow has the reputation of having terraced more freshly cleared land than any other man in Texas. Since County Agent R. S. McEachern came along 4 years ago, Mr. Harcrow has terraced more than 400 of his 1,300 acres of land, and 325 acres of this was new land.

About to abandon an 80-acre field that was down to 1 bale to 6 acres after 8 years of cultivation, Mr. Harcrow attended a county agent terracing school in 1929. Impressed, he induced Mr. McEachern to hold a similar school on his farm. With this start and the help of

Jesse Harcrow throws up high, broad terraces before the field is grubbed.

two trained farmers whom he hired by the day he terraced the old field. The next year this land produced 150 pounds of lint cotton per acre, and last year the yield climbed to 214 pounds of lint per acre.

Terraces are run on the Harcrow farm just as soon as the trees are cleared away. Terrace lines are grubbed out, terraces built, most of the remaining grubbing done, and the land plowed.

The recent cotton plow-up campaign was instrumental in bringing the records of these fields into sharp relief. The county average yield for 5 years has been 142 pounds of lint per acre. The community committee gave Mr. Harcrow an estimated yield of 250 pounds of lint per acre on all his terraced new land marked for retirement. The committee doubtless thought itself generous in allowing him almost double the county average yield, but when he had gathered the cotton from 135 remaining acres it was found that he averaged 307 pounds of lint per acre. Asked to place a cash value on his terraces he gave the answer most commonly given by Texas farmers: "The terraces are worth the land."

"We plan to get records of yields from Mr. Harcrow every year to see how long production can be maintained on terraced virgin land", says M. R. Bentley, Texas extension agricultural engineer. "We also want to find how much terracing will do to restore the original yielding power of worn-out land. There is little virgin land left anywhere; hence this farm offers a chance to obtain some very interesting comparisons."

Reach 30,000 Farm Women

MORE THAN 30,000 farm women in California responded during the 3 months' campaign of the home demonstration department of the University of California Agricultural Extension Service, to reach as many persons as possible with improved home practices. Efforts were made to get as many women as possible to attend who had not before been in touch with home demonstration work in the 25 counties having home demonstration agents.

The subjects of the demonstrations were those projects which the women have found particularly helpful in the present financial stringency; inexpensive meat dishes, one-dish meals, vegetable plate meals, bread and cheese making, pressure cooker canning, and other methods of food preservation; renovating garments and hats and making inexpensive dresses; furniture, floor and rug renovation, home-made equipment, and other work that helps conserve money and makes the best of what the farm woman has on hand.

Twenty-five counties report 956 demonstration meetings, with a total attendance of 21,321, or an average for each county for the 3 months of 38 meetings with an attendance of 852. Stanislaus County had 66 meetings with an attendance of 1,827, or 22 meetings a month with 609 women attending. Imperial County reported 61 meetings with an attendance of 1,367, or 22 for each meeting, and 455 for each month.

These figures indicate that the women carried on a vigorous and successful campaign. New homes adopting practices have not yet been fully checked. Contra Costa County reports 76 new homes for the 3 months; Imperial, 207; and Yolo, 145. The San Bernardino home demonstration agent writes: "The women report almost doubling the spread of work through their planned effort to carry the work to at least one who could not attend." The Sacramento home demonstration agent said: "Some centers reached more than the additional person per member."

Project leaders and neighborhood leaders have played a large part in these mounting figures of demonstration meetings and attendance. Fresno County project leaders conducted 12 meetings with an attendance of 217, and Riverside 32 with 416 women attending. San Joaquin project leaders and neighborhood leaders held 236 meetings with an attendance of 1,977—a wonderful accomplishment.

The County Adjustment Campaigns

Two Agents Tell How Cotton Contracts were Signed Up in Their Counties

Organization Gets Results

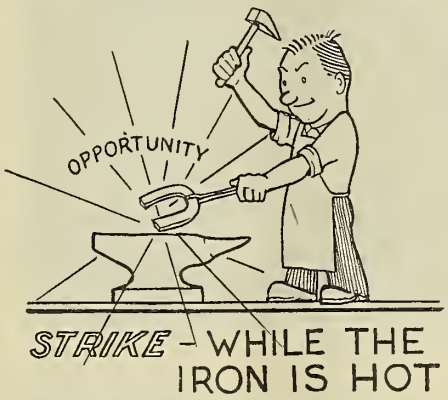
The 1933 cotton reduction acreage campaign as conducted in Madison County, Miss., was very successful. The county was the first in the State of Mississippi to sign its quota of acreage to be taken out of production. There were only 26 farmers who failed to cooperate in reducing cotton acreage. There were 1,863 contract offers accepted, totaling 26,295 acres offered to be taken out of production with an average estimated yield of 167 pounds per acre.

Upon a survey it was determined that the public in general understood and appreciated the objectives of applying the Agricultural Adjustment Act to the 1933 cotton crop, so there seemed to be no necessity of conducting an extensive educational campaign throughout the county. The essential fact then was to begin activities by writing contract offers, by the various committees.

A strong central committee composed of seven outstanding business men, bankers, and farmers was selected as a central county control committee. Twenty-two men with ability to speak in public were selected to conduct community meetings simultaneously throughout the county, and five field or contact men were selected to assist the county agent in working with the community committees. The county was divided into 14 districts and in each of these districts, 3 or more committeemen were appointed, depending on the approximate number of farmers living in that community. The county agent being familiar with the farmer's distaste for all clerical matters, it was realized that the offer tendering the cotton acreage to the Government would never be intelligently filled out or completed by the farmer alone. Therefore, a number of persons, more or less trained in clerical matters, were selected, and after being thoroughly schooled in the making out of the offer, were designated as writers, and were placed in the 14 community centers for the purpose of writing the offers and making the calculations required thereon.

Six instructional meetings were held for the purpose of training the central county control committee, community speakers, community writers, and community committeemen. The county-wide meeting was held at the county seat for the purpose of enlightening the public of the plans for applying the Agricultural Adjustment Act to the 1933 cotton crop, with an attendance of 2,658 farmers, business, and professional men. In the afternoon after the county-wide meeting, 11 community meetings were held simultaneously throughout the county for the purpose of enlightening the people who did not attend the county-wide meeting. Each community meeting was conducted by two speakers who had been trained for that purpose at the meetings.

In each of the 14 districts there was designated a place where contract offers would be written and received. After the contract offer was written, the crops covered in the offer were inspected by one of the committeemen in the presence



Sketch used by County Agent Myers in circular letter.

of the farmer. The estimated yield and the designated plot to be destroyed were entered on the contract offer in the field by the committeemen, and there the farmer signed the contract offer. Each evening the chairmen of the community committeemen were requested to report the number of contract offers, together with other data that were requested by the county agent. The total for the county was then compiled and wired to the State central office.

The county agent, appreciating the fact that there was an alarming shortage of food and feed crops in the county, instituted at the very beginning a movement for the planting of such crops on the lands to be taken out of cotton production. Upon a survey of conditions in the county, it was deemed necessary to issue emergency permits to practically every farmer who had made an offer. These permits were typed in the county agent's office where the necessary information was centrally located, and the work could thus be facilitated by doing it there before sending the permits to the farmer.

The question of measuring the land taken out of production was one of the hardest faced during the campaign. Improvised wire chains made from 14-gage galvanized wire 66 feet long, marked at every rod, and with wooden handles at each end of the chain were used. The community committeemen were instructed at several county-wide meetings held for the purpose of training these men in the correct ways to measure land and in several places college graduates were used to assist certain committeemen in measuring and computing areas. Field notebooks were used upon which a sketch of the shape of the plot to be destroyed was entered together with figures used in calculating area of the plots. These books in a system of rotation were forwarded to the county agent's office for corrections and checking before being passed as final.

In the county agent's office all contract offers were tabulated and checked. All duplicate copies of contract offers were indexed alphabetically. Duplicate copies, together with all records, reports, notes and other communications regarding each offer were filed with the proper offer in order that complete files might be kept on each offer.

—A. A. Myers, county agent, Madison County, Miss.

It cost only $1.44 per contract or 3.6 cents per acre to pay the extra administrative cost of the cotton retirement campaign in Lubbock County, Tex. The figures are low, say Washington authorities. The average cost the South over is believed to be from 10 to 20 cents per acre.

An explanation was requested from O. G. Tumlinson, county agent, who answered with one word "Organization."

MOST Lubbock County farm families were already working together in community organizations when the cotton campaign came along. The folks met regularly and worked out the various community jobs that needed attention. Every demonstration was arranged by the people themselves. Every demonstration was a community enterprise, studied by all, and discussed in common at meetings.

(*Continued on page 126*)

Clean Woodlot Brings Surprise Reward

WHEN W. S. Myres, a farmer living in Davidson County, N.C., made an improvement thinning of his few acres of shortleaf pines, he little dreamed of the resulting reward for his industry.

In thinning his pines he followed the recommendations of the State extension forester and local county agent. The trees remaining after the thinning comprised the large, sound, and straight ones, all evenly spaced at an average of about 15 feet apart on the ground. The grove covered a low, rounded hill. Two years later, G. W. Ackerman, photographer with the United States Department of Agriculture, visited the county and with the county agent took photographs of good demonstrations in crops, livestock, and farm forests. The Myres woods were included. The resulting picture showed an attractive forest stand and later found its way to the front cover page of the Progressive Farmer of April 28, 1928, with a brief descriptive note on one of the pages.

The picture which did the trick.

As soon as George Missen, a business man living in Winston-Salem, located only 16 miles away in the adjoining county, saw the picture he dispatched his secretary to examine the place and report on its suitability as a location for a summer cabin home. The secretary reported that the place was just as attractive as the picture, with a cold spring nearby, and the owner would consider an offer of rental. Mr. Missen acted quickly and the same day went to look over the place personally. The outcome was that he soon had a written lease from Farmer Myres for the use of about 4 acres of woodland for a term of 5 years, with the privilege of building a cabin, provided, however, that no tree be cut. The business man obtained the right to place a ram at the spring and granted the farmer the privilege of tapping the main line for getting water to his house and barn. Upon the expiration of the final lease or option all improvements are to revert to the landowner. In consideration for the lease Mr. Myres is receiving a rental of $50 yearly for a period of 5 years, with the privilege granted the lessee of a yearly option thereafter on the place for the sum of $120 per year.

It paid Mr. Myres better than he knew to cut the "waste" from his woods and convert the crippled, sickly, and poor kinds of trees into fuel wood. Woods improvement thinning, in any event, is a paying practice because of the increase in quality and value of the trees left standing. The day has come when many farmers are deriving additional financial returns from their timberland from such sources as game and recreation.

WILD FRUITS native to the Rocky Mountain region have been used extensively by Routt County, Colo., women this season in canning, drying, and preserving foods for winter use.

A feature of the recent achievement day for members of women's home demonstration clubs was an exhibit of wild fruits, including thimbleberries, chokecherries, gooseberries, raspberries, currants, Oregon grapes, and service berries, often called "sarvis" berries.

The County Adjustment Campaigns

(Continued from page 125)

It was only natural that these groups give the cotton campaign the same attention. The community chairmen called and advertised the meetings. Special effort was made to get everybody out. The chairmen conducted the meetings, and I was only called upon to explain the Government offer. I suggested the appointment of community committees if they wished to go ahead and emphasized the heavy duties and responsibilities of these committees.

Where a community was not organized the first thing was the calling of a meeting by leading farmers and the formation of a community council. When this was accomplished the campaign proceeded there as in other communities.

We had 29 community organizations run by farmers when the campaign ended. Farmers did the work and performed it faster and better and with less loss of time than would have been possible had they not been used to working together. We plowed up 100,000 acres or 40 percent of our crop. We had 98 percent of our cotton farmers in the deal.

The cotton campaign was made easy in Lubbock County because of our previous farmer organization. It is only fair to say that our organization was helped a great deal by the cotton campaign.

—O. G. Tumlinson, county agent, Lubbock County, Tex.

THIS IS THE fourth year of the Christmas tree marketing venture started in 1930 by the New Hampshire Extension Service. Business at the close of last year had totaled $7,600, including $1,800 the first year, $3,300 the second, and $2,500 in 1932.

Subsistence Homesteads

"COUNTY agricultural agents and home-demonstration agents can and will be of great assistance in our plans for subsistence homesteads", says M. L. Wilson, director of subsistence homesteads division of the Department of the Interior. "There can be little doubt as to the importance of the activity of these two extension groups in the locations where we have and will establish subsistence homesteads."

Mr. Wilson's division has charge of establishing subsistence homestead demonstration projects. An appropriation of $25,000,000 is available for this work. This is insufficient to attempt any wholesale transfer of people. Instead, it is planned to establish demonstration projects in many areas, affecting in all about 10,000 families.

Conditions Vary

The conditions surrounding each project will vary somewhat. Some projects will involve 35 to 50 families; others up to 200. The demonstration will provide a real test of the desirability of homesteads of this type and for ascertaining under what conditions people can best succeed.

Millions of people are entirely dependent on land and the products they obtain from it. Other millions are almost exclusively dependent upon industry, trade, and the crafts.

The depression is squeezing many people out of both general groups. The result is that a new place must be found for them. They cannot be thrust out of society or the economic system.

Can they be helped to readjust themselves in a field in which they would have some dependence on both industry and the land without complete dependence on either? Mr. Wilson believes they can.

Employment

But he believes the homesteaders must be so placed that they will have part or full time employment. They must have cash and their cash must come from some other source than cash cropping.

"It is remarkable what the combination of a family, good sense, and a piece of good land can accomplish", Mr. Wilson said.

During the past 20 years men and women have moved from the farm to the city in great numbers seeking the "pot of gold" that they believed to be hidden there. Now some of these families are to be given an opportunity to return to the land but not in the helter-skelter manner which has brought so many folks to grief in the last 4 years.

Three types of homesteads are now being considered: The small 2- or 3-acre lot with its comfortable workman's home and facilities for gardening and a small flock of poultry will be used in locations such as the one now started near Dayton, Ohio, where land prices are high and where local industry is willing to cooperate in furnishing part-time work for the homesteader. There are 33 such homesteads in the Dayton projects on 160 acres of land.

There will be an intermediate-sized homestead of 4 or 5 acres which will afford facilities for growing small fruits in addition to the gardening and poultry.

The largest size will contain 5 or 6 acres. The first of these has already been located at Reedsville, Preston County, W.Va. Land has been purchased to the extent of 1,100 acres. Arrangements have been made for the establishing of a factory by the Post Office Department to make some of its equipment. Each homesteader will be assured of an income of at least $1,000 each year. These homesteads will make it possible for the individual to have his own cow, small fruits, poultry, and vegetable garden.

Production of supplies for home use only is specified. There is to be no commercial farming. Certain forms of barter will allow the homesteader to obtain supplies which he does not produce from neighboring farmers.

Some of the plots will be allotted to farmers who are now trying to farm on marginal land, which will be retired to forests or parks. This is where the extension agents can be of real service, keeping in mind the planning of operations that will produce and preserve food for home consumption.

"We are trying to raise the standards of living for three classes of people," Mr. Wilson said. "First there are the stranded unemployed, for example part of the 200,000 miners who will never return to the mines; second, a better type of home for the workingman in urban sections; and third, a shift of farmers from poor agricultural land to land that will allow for efficient operation."

HARTFORD CITY, IND., as all manufacturing towns, has its share of unemployment, which has presented a big problem. A plan was finally thought out whereby the township could help these unemployed to help themselves.

Walter U. Rusk, county agricultural agent of Blackford County, enlisted the help of the Kiwanis Club to obtain land and seeds so that the needy could plant gardens. Each family was encouraged to have its own garden. In the spring Mr. Rusk put out monthly bulletins on the care of the garden, which were mailed to each unemployed family interested in this project. Aided with what personal service Mr. Rusk could give and the monthly bulletins, people did very well with their gardens in spite of the fact that the weather man was none too kind.

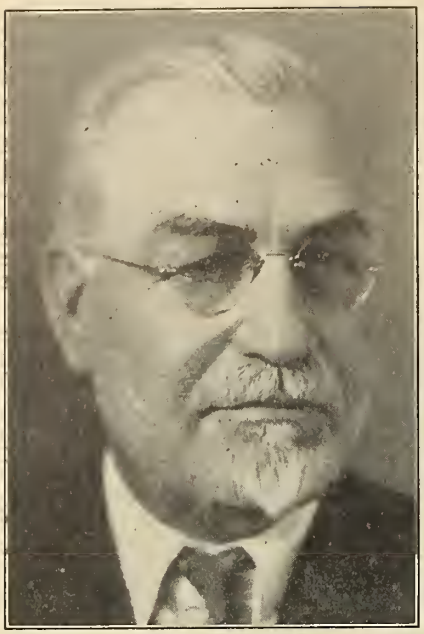
More produce was on hand than would be used during the growing season, and the question naturally arose of what to do with the surplus. The help of the Home Economics Extension Division of Purdue University was enlisted and arrangements made to hold three canning demonstrations in the county, two of which were held in different sections of Hartford City and the other out in the county. Because it was impossible for these people to have anything but the simplest of equipment, all canning was done by the water-bath method, using a lard can with a home-made false bottom. Other types of canning equipment, such as the steam and pressure cooker, were shown and their use explained.

Intense interest was shown by the women attending these meetings. Most of them had canned before, but the majority had a great many problems to present, as many had been having difficulty in keeping their canned products.

At each of these meetings, applications for jars, which the Kiwanis Club had promised to furnish, were made by the women. In a day's time applications were made for 84 dozen jars. The Kiwanis Club, instead of buying all the jars, devised a plan to have them donated. One of the local theaters put on a benefit show for children, the admission charge being two glass jars with or without lids. Jars came from all directions, and by the time the show commenced, there was a large-sized truckload of jars outside the theater.

Plans have been made to have an exhibit of canned foods from the surplus of the gardens of the unemployed.

COUNTY EXTENSION agents of North Dakota are key workers in the livestock-feed relief program begun by the State emergency relief committee. Local stock-feed committees are being appointed in each county to handle the application for livestock-feed relief. Every county is to be included for the relief activities.



DR. E. M. NIGHBERT, extension veterinarian in animal parasite control, recently retired after 30 years of service with the United States Department of Agriculture. Since the fall of 1930 he has been connected with extension work. Dr. Nighbert at 64 says, "I am just starting to live." During the last 10 years he has done much toward the control of parasites in horses, sheep, and swine.

Dr. Nighbert based his efforts on securing the cooperation of local veterinary associations and the extension workers. His bulletin on the control of various parasites of horses was one of the most popular issues of his office. Special work was done by Dr. Nighbert in cooperation with extension workers in Illinois, Arkansas, Kentucky, and Missouri, where his campaigns against the horse bot were particularly successful.

The Farmer's Problem—Everybody's Problem

(*Continued from page 114*)

the like. Their schoolhouses are poor and their children are underprivileged. Certainly it is advisable for the Government to consider the use of land and to furnish a long-time plan.

I am happy to say that on July 26 last President Roosevelt in announcing the appropriation of money for a western reclamation project stated it was his policy to retire from use land of equal productive power with that being brought into use. This kind of thing, of course, takes time and it has little to do with the immediate national emergency. It is exceedingly important to fit our emergency actions into a sensible long-time program so that one will begin where the other leaves off. If we take our time and study the problem carefully from the long-time point of view, we can undoubtedly transform our present temporary program into something which is truly statesmanlike and wise.

National 4-H Club Radio Program

Annual Theme: 4-H Club Work Influences the Farm and Home

Second Phase—4-H Club Work Contributes Toward the Farm Living

Saturday, February 3, 12:30 to 1:30 p.m. Eastern Standard Time

The Vegetable Garden is a Money Saver and a Health Tonic	4-H club boy from Michigan.
Club Work Has Helped in Clothing Our Family Economically and Well	4-H club girl from Maryland.
4-H Club Work Contributed to the Live-at-Home Program	State home demonstration leader from Maryland.
4-H Club Work Has a Place in the Adjustment of Agriculture	Field agent, Extension Service, United States Department of Agriculture.
Music We Should Know—Second Phase of the 1934 National 4-H Music Hour Featuring Compositions by Sousa, Mendelssohn, Rossini, Herbert, Romberg, and Handel	United States Marine Band.

Improving Farm Horses

Horse parasite control work was first started in 8 Illinois counties in 1930–31. The following year about 150,000 horses were treated in 66 counties, and the next year the work spread to 72 counties. More than 200 practicing veterinarians have cooperated in administering the treatment.

A special check-up of the results revealed that 79 percent of the owners noticed improvement in the general condition of horses following treatment; 69 percent of the owners detected that treated horses worked better than untreated horses throughout the spring and summer; 70 percent of the owners noticed an appreciable reduction in the number of cases of colic; 90 percent of the owners observed a reduction in the nosefly pest during harvest, and 94 percent of the farmers expressed a desire to have their horses treated in the 1933–34 campaign.

A TOTAL of 906 farm boys and girls, or 1 for every 100 citizens in Nevada, were entrolled in 4-H club activities this year. Fifteen agricultural projects were undertaken by boys in the various clubs in the State, with gardening, which enrolled 125, the most popular.

Vegetables Auctioned

The auction system of marketing vegetables, tried out at Lake City, S.C., this year in the interest of better marketing for truck growers of Florence and adjoining counties, proved very satisfactory.

During the early part of this year the local buyers at Lake City formed a truck buyers' board of trade, which worked out arrangements for trying out an auction market, built an auction platform, procured an auctioneer, and made arrangements for the Extension Service to give Federal-State inspection on all produce offered for sale. To cover expenses of auction and inspection a fee of 1½ cents was charged for each package sold, though no charge was made for the service unless sale was actually consummated.

The auction and inspection charges were on an actual cost basis, and the money remaining after the expenses were paid is to be used by the board of trade in building additional facilities for handling the produce, for advertising the Lake City market to the buyers in the terminal markets who consume vegetables, and for improving the quality and appearance of the packs of vegetables moving from the Lake City market.

A Message to Home Demonstration Agents

I ASSUME that as county home demonstration agents go about their work they naturally devote the greater part of their attention to those very tangible things which have to do with clothing, food, and home management. But I am also sure, as I observe the ramifications of the adjustment program, that it is necessary to step beyond the tangible, because some things that are less tangible and less immediate are in the long run more real than the things that have to do with the daily routine of housekeeping or farm work.

So I am suggesting that you not only put into effect the very best information which you are able to get, from whatever source, on the regular program of foods, clothing, and caring for the home, but that you, in addition, try to break down the thing which has characterized farmers in every age, the feeling of isolation, and that you try to produce in its stead the feeling that farmers are one with the larger whole.

It is urgently necessary to break down these walls between families, between communities, between States, between nations, with a vision of the problems faced by agriculture and our interdependence in solving them. This thing sweeps a nation and sweeps the world. It can mean that the conquest over nature, which we have demonstrated already, can be reflected in a standard of living at least twice as high as that which we had in 1929. These things can be done. It is only a question of widespread effort to catch the larger vision. The essential of the New Deal is to furnish leadership through the far-flung activities of Government to enable our people to catch that vision.

The farm family should understand just why it is necessary to control the acreage and, while that acreage is being controlled, why it is desirable for our national leadership to make a more enlightened policy regarding the tariff. If this is worked out skillfully, the farm family can see why production adjustment is necessary. You can go, from an approach of this sort, into every realm of foreign relationships and industrial management in this country. These things should be debated in every home in the country, so that we may have a national comprehension as to what the true relationship may be.

We should throw all our efforts against the broadest possible background. If we merely follow the routine of the technical things, we tend to get into a rut after a time and lose the inspiration that we are doing something supremely worth while, or we come to a time when we feel that it is rather a forced enthusiasm. It is essential that we have something beyond us which we will never realize completely and toward which we can strive continuously. As we go about our work, we should create the impression that we are a part of the Government, that the Government is part of us, and that we are working together for these objectives. Our objectives are undergoing development continually, changing day by day as a result of the advance we have made previously.

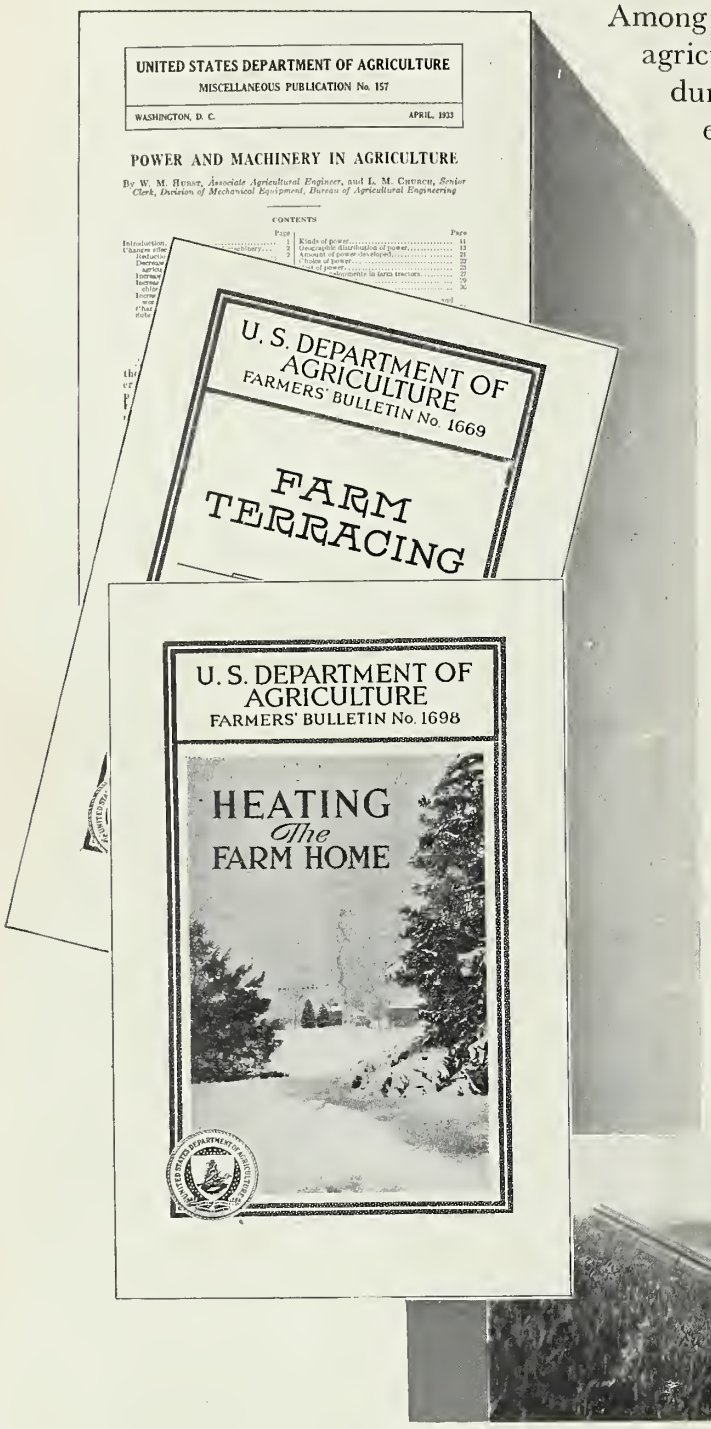
Our whole effort is of necessity in a constant state of flux and growth, and no one knows when the most humble person with whom we are working may have something marvelous to contribute to the accomplishment of our program.

H A Wallace

Secretary of Agriculture.

ENGINEERING IN AGRICULTURE

effects economies in production and makes farm living less arduous and more enjoyable



Among the farm improvements reported by county agricultural agents and home demonstration agents during 10 years of extension work in agricultural engineering, 1923–32 are the following:

Land improvements, 1923–32

- Terracing 12,812,234 acres
- Clearing 3,954,623 acres
- Draining 2,442,109 acres
- Irrigation for 778,461 acres

Building improvements, 1923–32

Building plan and consultant service on

- 21,724 new dwellings built
- 30,464 old dwellings remodeled
- 437,386 other buildings constructed or remodeled on 321,903 farms

Utilities improvements, 1923–32

Planning and consultant services on

- 36,278 sewage disposal systems installed
- 32,570 water supply systems installed
- 29,801 electric lighting systems installed
- 5,763 home heating systems installed

Machinery-efficiency improvements, 1929–32

- Repairing 105,650 machines on 43,339 farms (4 years)
- Selection of machinery on 78,255 farms (3 years)
- Machinery practices on 803,889 farms (6 years)

BUREAU OF AGRICULTURAL ENGINEERING

U. S. DEPARTMENT OF AGRICULTURE

WASHINGTON, D.C.